UNESCO SOURCES

No. 24 - MARCH 1991

FOCUS

COASTAL ALERT: THE TIDES OF CHANGE

AMAZONIA: UNIVERSITIES UNITE

THE FAMILY IN FLUX

Readers, we have reserved this page for your comments, suggestions and criticisms. Consider it yours !

SCIENTIFIC INFORMATION ACCESSIBLE TO ALL

Reuben M. MOLEFE
Journalist
Dar-es-Salaam, Tanzania

I was very impressed by the article "*Impact: Scientific Information Accessible to All*" in your January 1991 (No.22) issue. I agree that Science is knowledge of our world, and that ignorance of it may be disastrous. Human beings can safely claim to have harnessed nature, or more specifically its vicissitudes, but there are so many "*side effects*".

UNESCO is now faced with the challenging task of placing scientific information within reach of all people to help them contribute towards solving such problems as damage to the ozone layer, deforestation, climate change, natural disasters, species extinction, unsustainable population growth and many other burning issues.

We can act locally, but we must communicate nationally, regionally and globally. For UNESCO to co-ordinate such action and ensure our common future, will require an unprecedented level of mass communication. The free distribution of *Impact* to many institutes and scientific bodies in developing countries serves as an excellent aid in this regard.

A JOB WELL DONE !

J.R. DAVID
Institute for the Development of Communication
University of the Philippines
Los Banos, Philippines

I was able to read *Sources*' December 1990 (No. 21) issue which focussed on community broadcasting. I must congratulate you. It was a job well done. The various cases very effectively pointed out the vast possibilities of radio when it is put into the hands of the people.

I shared my copy of *Sources* with many others and most of them wanted more information on community radio.

GREATER READABILITY NEEDED

Serge DOMICELJ
Professor of Town Planning
Sydney University
Australia

Having had the opportunity to look over the February issue (No. 23) of *Sources*, I would like to make a few observations about the new format:

- the layout is somewhat disconcerting in terms of the use and location of colour and typesetting;
- the additional visual impact sought should lead to a clearer sense of order enabling greater readability, particularly on the back cover.

Thanks for your comments. We have already modified the back page and are working on other areas of the new format. - ED

AGREABLE, EASIER TO READ

Denise PELISSIER
CNRS
Paris, France

Well written and in a lively manner, *Sources* provides a wealth of information on UNESCO's activities. I find the new presentation very agreable, less compact and easier to read, with, however, a few minor reservations - perhaps you might consider toning down the red for the table of contents and the back page.

Your comments are very encouraging. We will be making gradual modifications in the forthcoming issues. - ED

AND COMMUNICATION ?

Justin VAN DEN BURGHE
Journaliste
Gand, Belgium

Thank you for your panorama of UNESCO publications in *Sources*' January (No. 22) issue. I was familiar with the *Courier* but almost totally unaware of the others. I would, however, like to ask one question: why doesn't UNESO have a publication devoted to Communication? Besides the fact, if I am not mistaken, that it is one of your Organization's fields of competence, the development of communication is among the major challenges of the end of this millennium. Everywhere, and notably in my own country - Belgium - magazines concerned with communication, information and the media have mushroomed in recent years. The theme is, in fact, of such vital interest, that UNESCO should be able to break even financially with such a publication. And it would no doubt be the only one which, by its universality, could report on how modern communications are transforming our world into a "*planetary village*".

Do communications specialists really lack publications? From UNESCO's viewpoint, this type of magazine, as you yourself point out, has proliferated to an extent where it is uncertain that yet another would make a significant contribution. Without even mentioning the cost ... - ED

READEX FICHE

A CALL FOR PEACE

Faced with the dramatic events affecting a growing part of the human race and the material devastation brought about by the violation of international law and the unleashing of war in the Gulf, people all over the world are expressing ever more widely and strongly their concern over the grave danger threatening educational, scientific and cultural institutions and the substantial damage being done to the cultural and natural heritage of humanity.

An Organization established within the United Nations system to ensure that, through education, science and culture, understanding should prevail over violence and peace should triumph over war could not remain silent in the tragic circumstances in which humanity finds itself today : the events arising from the occupation and annexation of Kuwait and the military operations have caused great damage and claimed large numbers of civilian victims in Iraq and Kuwait and have extended even to the population of Israel, which is a non-belligerent. Furthermore, it is clear that the growing scale of this confrontation is seriously threatening the life and security of all the countries and peoples of the region, including the Palestinian people.

Conscious of these facts and of the Organization's ethical and moral role, I issue a heartfelt appeal for the scrupulous observance of the obligations and duties imposed by international law, and in particular by the Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict ... In issuing this plea, and bearing in mind that peace is UNESCO's prime constitutional objective, I fervently call on the parties to the conflict and the international community as a whole to do everything in their power, individually and collectively, to prevent a further increase in the tragic toll of victims already claimed by the hostilities, and finally to prevent the spread of the war and the consequent environmental damage. It is imperative that the hostilities should cease as soon as possible and that dialogue and consultations should be resumed so that a future may be built with wisdom and clear-sightedness on the basis of equity, law and justice - the pillars of peace. Millions of young people and children are today bewildered by the behaviour of their elders. It is they who will judge tomorrow the decisions and actions of today.

Extract from the call for peace launched by Director-General Federico Mayor, February 7, 1991.

The moral world of mangroves.

Saving the Amazon.

What future for the family ?

Cover photo : Coastal lagoon along the shoreline of Aquitaine, France (Photo ©).

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UNESCO SOURCES

PERIODICALS

MUSEUM

Parks and Gardens of Delight. *"If you want to be happy for a year, butcher your sheep. If you want to be happy for life, plant a garden."* ... This proverb introduces the theme of *Museum*'s current issue (No. 169) which, after recalling that the first gardens probably appeared in Mesopotamia 5000 years ago, leads off with *"Never land or Tomorrow land"*, a discussion of the pros and cons of Disneylands and other theme parks.
The magazine then explores the concept of paradise gardens in Islamic art, takes a look at the Chapultapec garden in Mexico City, one of the oldest urban green spaces in Latin America, and an effort to turn Sicily into a garden of giant sculptures.

COVER PHOTO : GARDEN OF EARTHLY DELIGHT (DETAIL) BY HIERONYMOUS BOSCH, EL PRADO MUSEUM, MADRID

Other articles report on the revival of a unique 17th century Spanish garden - El Retiro, near Malaga, Renaissance Bomarzo - Park of Monsters near Viterbo (Italy), and the du Pont family's Winterthur Garden in Delaware (U.S.). Readers are even invited for a "swim" through three underwater parks and a stroll in time and space back to some remarkable gardens of Eastern Europe, recorded in hitherto unpublished photos taken in 1924 by American landscape architect Margaret Rutherford Jay.

NATURE & RESOURCES

Ocean and coastal research concerns. Providing an overview of scientific knowledge with some projections for the future, the articles in this issue (No. 4/1990) examine the latest ocean and coastal research in light of current concerns regarding global change, environment and development. Written by outstanding world marine scientists, they focus on human impact on tropical coastal zones, the *"flux and fate"* of fluvial sediment in coastal seas, the science and management of marine living resources, ocean and climate, and challenges presented by sea-level change. All press for intensification of Research & Development programmes, geared to more effective management of ocean and coastal resources upon which billions of people depend.

THE UNESCO COURIER

A World of Music. French ethnomusicologist, Isabelle Leymarie, special consultant for this issue (March 1991) introduces the theme by tracing the different currents of musical cross-fertilization back to the eighth century, with the spread of Indian, then Arab music. A producer of programmes for radio, television and theatre and author of many articles on jazz and Latin American rhythms, Ms Leymarie cites several historical and social factors responsible for the present intensification of musical blending which, she says «reflects a deep-felt need for communication and mutual understanding." Other articles focus on the Blues, Brazil's "Kaleidoscope of Sound", Latin Jazz, Rock, Tex-Mex, Indian music, etc. This month's *Courier*, with a cover design especially created by Iranian graphic artist, Bita Seyedi, and American painter Robert Motherwell's "In Ochre and Yellow with Sheet Music" on the back, also contains an interview with Cameroon-born musician Manu Dibango.

RECORDS

CANADA: INUIT GAMES AND SONGS

This recording is devoted to vocal games and songs of the Eskimos, or Inuit ("men") as they call themselves, in North-East Canada. The major part presents "throat-games" (*katajjait*), which have a

unique sonority and timbre. Generally performed by two women face to face, the game continues until one is out of breath or laughs. Also included is a Shaman song and the *aqausiq*, sung to amuse children and show them affection. While the music of the Inuit is mainly vocal, the record is completed with two pieces played only on instruments: the Jew's harp and the Eskimo violin.

● **Canada: Inuit Games and Songs**. *Musics & Musicians of the World, UNESCO Collection of Traditional Music. Auvidis/ UNESCO, 1990. Cassette 52 FF. Compact 109 FF.*

HONG KONG: INSTRUMENTAL MUSIC

Devoted chiefly to solo music, this record begins with the classic *"The warrior takes off his battle armour"* played by present day master Lui Pui-Yuen on the *p'i-p'a*, a type of guitar. Other melodies are played on the *yang-ch'in*, literally *foreign zither*, the *shêng*, an ancient mouth-organ, the *hsiao*, a vertical flute, the *ti* or *ti-tzu*, a traverse flute made of bamboo, the *êrh-hu*, a two-stringed violin of Mongolian origin, and the *chêng*, the Chinese psaltery.

● **Hong Kong: Instrumental Music**. *Anthology of Traditional Musics series. UNESCO Collection of Traditional Music. Auvidis/UNESCO. Cassette 52 FF. Compact 109 FF.*

BOOKS

STATISTICAL YEARBOOK

The 1990 edition of UNESCO's *Statistical Yearbook*, containing over 1000 pages, 93 tables and a wealth of graphic materials, presents worldwide trends and information on some 200 countries and territories, in the fields of education, science, culture and communication. The first part consists of basic reference tables, two on population - with estimates and projections of total population and that below age 25, for the world, by continents, major areas and groups of countries between 1970 and the year 2000 - one on illiteracy and one on educational attainment. The following three chapters provide statistical data on education at all levels, by continents, major areas and groups of countries, including numbers of schools, and teachers, enrolment by sex, by level and type of education, and finally, in terms of public expenditure. The section on Science and Technology presents trends since 1970 and potential for S & T personnel as well as scientists and technicians involved in and expenditure devoted to research and experimental development. Also included in the *Yearbook* are chapters on libraries, book production, newspapers and periodicals, cultural paper, archives, museums, film and cinema, international trade in printed matter, and radio and TV broadcasting. Information based on surveys carried out between 1984 and 1988 indicate, for instance, that 36 countries and territories do not yet have their own television service.

● **Statistical Yearbook**, *Unesco, 1990. Trilingual Eng/Fr/Span with introductory texts in Russian and Arabic, 1072 pp, tables, graphs, 350 FF.*

Publications and periodicals are on sale at the Unesco Bookshop, or by order from Unesco Press, 7 place de Fontenoy, 75700 Paris, and in Member States through national distributors.

THE MEMORY OF N'ZONGO SOUL

The press describes him as *"a star in his country, the Congo"*, and his music as *"Soukouss* (a popular dance) *revised by Rock"*. With his Rasta haircut and leather trousers, it is hard to imagine him at an international conference on a new balance between North and South. But this is what N'Zongo Soul, composer and performer, has just done. *"I didn't have a prepared statement, or a brief case,"* he said, *"just a different way of looking at things. But that is why I was invited, isn't it?"*

In January the *Fondation de France*, established in 1969 by General de Gaulle and André Malraux to collect and distribute funds for development programmes in the Third World, organized a meeting between NGOs from the North and the South in Cotonou, Benin. N'Zongo Soul was invited to this meeting by UNESCO's International Fund for the Promotion of Culture.

"I have been singing since I was 10," he says, admitting to be "around 30" and having made several records, of which a few were "hits". After teaching English for three years in a secondary school in Brazzaville, he moved to France where he has been living since 1985. Why was he invited to the meeting? *"Because I speak my mind perhaps,"* he laughed. But obviously there were other reasons: as a singer and composer, he draws on Walla, the ritual music of an ancient kingdom of the Congo which he updates. For instance, he uses synthesizers and computer programmes alongside traditional percussion instruments. *"My music,"* he explains, *"is an extension of the oral memory."* Indeed "Memory" is his favourite word. *"I am your forgotten memory,"* he sings in *Tam-Tam de vie*. And he plays an active part in a cultural NGO "Mémoire du temps".

In Cotonou, *"the organizers wanted a different way of looking at things. With me, they got it!"* After one workshop, he told us what had surprised him most. *"Originally, NGOs were meant to play a counter-balancing role, to provide alternative solutions,"* he said. *"But I saw they had turned into power bases themselves. People use NGOs to enhance their own authority. There are the naughty NGOs of the North with their imperialist money bags, and the nice NGOs of the South who are always right. At least that's the image they give. At the meeting people delivered their own speeches, but didn't listen to each other. I didn't bring anything, so I was free to react naturally to what was going on. I suddenly began to wonder, for example, why it is that the North sends experts to the South. Why don't experts from the South go North?"* Tongue-in-cheek naïveté ...

Max Cerrans

A PENCIL, A NOTEBOOK TO "CHANGE THE WORLD"

LAUNCHING CEREMONIES AT UNESCO HEADQUARTERS (Photo Unesco/Michel Claude).

With 10 francs, we can change the world ... This was what 8-year old Jerome thought about the campaign "A Pencil, a Notebook" launched at Headquarters on February 13.

Opened by a four-hour broadcast over French TV channel Antenne 2, the operation called on youngsters, aged 6 to 15, to send 10 francs by cheque to UNESCO. With the money - the Société Générale Bank is graciously registering donations - UNESCO will buy exercise books and pencils for children in developing countries who need but often cannot afford them.

The sum seems small, especially since, as the Antenne 2 commentator pointed out, *"the total number of illiterate persons around the world would fill 50 million classrooms, with 20 pupils in each."*

Fifty million! But ... with five francs, UNESCO can purchase eight ball-point pens from Reynolds which has generously agreed to double the number bought; and with the same amount UNESCO can buy eight 48-page exercise books.

Thus, thanks to the contribution of a single child, eight pupils in Niger, in Vietnam, or in the Philippines - the first countries where material will be shipped - can begin learning to read and write.

The French Ministry of Education, the Nathan publishing house and other companies are supporting the campaign. In addition, thanks to Air France and UTA, some of the French children will travel to a number of recipient countries and deliver the pencils and notebooks in person.

René Lefort

Cheques (no cash please) should be made out to UNESCO-Alpha and addressed to UNESCO, Literacy Unit, 7 Place de Fontenoy, 75700 Paris (France)

● **French fashion designer Pierre Cardin** and German television actress Witta Pohl have been named honorary ambassadors to UNESCO's Chernobyl Programme. At a ceremony in Paris February 11 to mark the event, it was announced that Mr. Cardin will create a medal on the theme "protecting the environment", which will be sold throughout the world to raise funds for the programme.

● **Colombian neurobiologist Riascos Llinas** has been awarded UNESCO's Einstein medal in recognition for his work on the brain and the central nervous system. Professor Linas, who holds the chair of neurobiology at New York University and is also a member of the International Brain Organization's (IBRO) executive committee, received the gold medal in a ceremony at Headquarters on February 11.

HOW CAN VENICE BE PROTECTED FROM ITS FAMOUS AGUA ALTA ? (Photo Unesco/A F I)

COASTAL ALERT : THE TIDES OF CHANGE

Coastal zones, home to more than half of the world's population, are undergoing far-reaching changes that will profoundly effect the lives of all who live there (pp. 7-8). UNESCO is working with marine scientists of the calibre of Björn Kjerfve (p. 9) to increase understanding of the importance of these regions. Its projects have helped reveal and protect, for example, the secret wealth of mangrove forests (p. 11), or the protective functions of coral reefs (p. 14). Through the COMARAF and CARICOMP programmes (pp. 15-16), the Organization is contributing to the training of scientists who can help prepare for the consequences of phenomena such as sea-level rise (p. 10) and work towards the harmonious development of these fragile zones that cover only about eight per cent of the earth's surface, but which represent the most productive and ecologically diverse systems on the planet.

ALL ARTICLES ARE FREE OF COPYRIGHT RESTRICTIONS. SEE P.3

Rocky coasts, beaches, river mouths, fjords, estuaries and lagoons, barrier islands, intertidal flats and wetlands: our coasts are characterized by a large variety of forms shaped in the course of geological history. To these can be added those originating chiefly from biologic activity such as coral reefs, sea grass and kelp beds and mangroves.

Together, these coastal systems represent an almost infinite variety of niches in which creatures have abundantly developed, both in species and numbers. Speculation about the origin of life often points to coastal waters as the first habitats. Young marine animals seek refuge there to grow in an environment provided with sufficient food and shelter against predators. Birds use them to gain energy for their long distance migrations.

More than half of the world's rapidly increasing population lives near the coast, and humanity's relationship with these zones goes back a long way. Initially it provided food and security (this remains the case in the tropics) then a focal point for industrial and commercial development, and, more recently, a place for leisure and conservation.

The early development of ingenious fishing techniques proves the existence of stable societies which made the utmost of available resources while maintaining a symbiotic equilibrium with the environment. In Chili, for example, traditional fishermen have used their knowledge of breeding patterns to harvest the prized *"loco"* shellfish while maintaining its numbers. In recent years, an influx of unskilled people seeking work has led to the overfishing of the gastropod to the point where its existence, and the millions of dollars it brings in export revenues, not to mention the livelihoods of a great number of people, are now under serious threat. The development of modern fishing techniques has had a similar effect in many other parts of the world.

In addition to such changes, which because of their cultural aspects attracted the attention of Unesco from the beginning of the Organization's existence, other changes have also occurred which have become direct threats to the survival of coastal systems.

CONVENIENT DUMPING GROUND

These are not only caused by demographic pressure but also and often mainly by unthoughtful and harmful use of the coastal zone. A long list of them can be given. Foremost is perhaps water pollution, threatening extinction of rare species and of complete ecosystems. For more than a century coastal waters have been seen as a convenient dumping ground for humanity's increasing mountains of waste materials or energy.

The physical and ecological disturbance this causes often results in far-reaching physical or chemical changes, leading to declining biological diversity or productivity and abandonment of coastal land.

Next comes direct destruction of specific habitats, and *"nurseries"* such as mangroves, and coral reefs. Topographic changes caused by land reclamation, urban development, harbour construction, sand exploitation and acceleration of sea level rise are also contributing to the damage. Recreation may sometimes be considered a nuisance, and has led to the disfiguration of many previously scenic coasts, but has also done a lot to make a wide public aware of the great beauty of the coastal zone and the necessity to protect this splendid environment.

Another aspect now demanding more specific attention is the effect of climate change on coastal systems. This is not only important in terms of sea level rise but also to differences in continental inputs such as river and sediment discharge and to possible changes in nearshore water circulation. Changes in salinity, already apparent, for example, along the coastlines of countries in the Sahel region, and temperature, also have a profound influence on ecosystem structures.

It took many years before the need for careful management of these zones to avert such threats was recognized. This has now been generally accepted but the awareness has often not been followed by adequate action. Balanced management is, in the majority of cases, simply not programmed because of conflicting interests - between

developers and ecologists, engineers and geologists, and landowners and economists. These interests range from complete protection on the one hand to full exploitation on the other.

Two international organisations, the United Nations Food and Agriculture Organization (FAO) and UNESCO, took an early lead in assisting countries to develop coastal management programmes. The United Nations Environment Programme (UNEP) followed suit in the 1970s. The FAO has especially assisted in developing regional programmes for fisheries, while UNESCO has taken a multipronged approach. The Man and Biosphere (MAB) programme has coastal components, stressing the needs for conservation. The Intergovernmental Oceanographic Commission (IOC) has looked at problems of exchange between coastal and shelf waters and the blue ocean, as well as dealing specifically with marine pollution. The Division of Marine Sciences, under the IOC umbrella as of this year, has developed the COMAR programme.

COMAR (*coastal marine project*) is an effort to increase our scientific understanding of coastal waters and to transfer this knowledge to participating countries for the benefit of better management and sustainable development through extensive training and research programmes.

A PYRAMIMONAS PHYTOPLANKTON SPECIES, YET TO BE DETERMINED BUT PROBABLY NEW TO SCIENCE, TAKEN FROM THE GULF OF NAPLES, IS HERE PHOTOGRAPHED USING A SCANNING ELECTRON MICROSCOPE DURING AN ADVANCED INTERNATIONAL MARINE PHYTOPLANKTON COURSE CO-SPONSORED BY UNESCO IN NAPLES (ITALY) LAST AUGUST. (Photo Stazione Zoologica, Naples)

COMAR CONFERENCE

"Coastal Systems Research and Sustainable Development", an Interregional Scientific COMAR Conference, will be held from May 21 to 25, 1991, at UNESCO's Paris Headquarters. Hosted by UNESCO, the Scientific Commission for Ocean Research (SCOR) of ICSU, and the International Association of Biological Oceanography (IABO), the Conference will, for the first time, bring experts involved in various regional projects related to UNESCO's Coastal Marine Programme (COMAR) together with other key specialists of the coastal zone, one of the most important and critical areas of the planet. Among themes to be tackled by the about 60 participating marine scientists will be: Human influence and evolution of the demography of coastal zones; Global Change and the Coastal Zone; Coastal Zone research - the contribution of disciplines to the interdisciplinary approach; and Human society in the coastal zone. A special session will be devoted to COMAR's Major programme in Asia and the Pacific, in Africa (COMARAF), in Latin America and the Caribbean (CARICOMP), and in the Mediterranean, Red Sea and the Gulf area. Still others will address Interregional comparison and co-operation and examine case studies involving human impact on the coastal zone and possible solutions. In addition, a General Assembly of the International Society for Mangrove Ecosystems (ISME) will be organized during the second day of the Conference.

Because it leans heavily on scientific information, it has, from the start, sought close co-operation with the global marine scientific community.

COMAR formally came into being in 1981 but activities had begun long before that, resulting in a number of books and reports which provided the base for large-scale budgetary projects. Experts from countries with both advanced and limited coastal research capacities participated in this work resulting in the formation of a group of people devoted to global development of coastal science and management which serves as the COMAR consultative panel.

A REGIONAL APPROACH

Activities are concentrated in areas where knowledge is particularly deficient, such as the tropics. The principal marine ecosystems in these regions include lagoons, estuaries and bays, mangroves, coral reefs and sea-grass beds. A regional approach was adopted to respond to the specificities in Asia and the Pacific, Africa, Latin America and the Caribbean, and in the Mediterranean, Red Sea and Gulf Area.

Another factor that will influence COMAR activities is the recent emphasis on *"sustainable development"*. To give a meaning to this term predictive capabilities are essential for which scenarios based on ecosystem models are necessary. This requires the collection of extensive data sets which are mostly not yet available. Predictive capability does not only allow us to look into the future but can also be an important instrument for the rehabilitation of deteriorated coastal systems. A programme of rehabilitation does not simply mean restoration of an old ecosystem, but the creation of good conditions for a new ecosystem that may or may not be similar to the old one but in any case is characterized by the old biodiversity.

The pressures on coastal zones have increased enormously. In many parts of the world, the equilibrium between human activities and the environment has been profoundly altered. *"Is a new and beneficial equilibrium possible"* is the question marine scientists are now trying to answer.

Henk POSTMA
Former Director,
Netherlands Institute for Sea Research,
Chairman of the UNESCO/SCOR/IABO
Consultative Panel on Coastal Systems.

BJÖRN KJERFVE : LINKING NORTH AND SOUTH

A swan dive to impress a pretty girl and a near-broken neck, convinced this intrepid Swede he'd better "learn more about the oceans".

Taking a break from a recent meeting on the *"Monitoring of coastal systems in relation to global change"* at UNESCO Headquarters, marine scientist, Björn Kjerfve, was relaxed and accessible. Yet, he had just arrived from another UNESCO meeting, in Jamaica, on training methods for Caribbean coral reef, mangrove and seagrass ecosystems, and somewhere in between had organized his own workshops in South Carolina (U.S.) on the *"Charleston Harbor and coastal ocean pilot study."* Moreover, the intrepid Swede, who obviously waits neither for time nor tide, was due, *"in about an hour"*, to leave for Brazil.

"He's very well organized," understated Marc Steyaert of UNESCO's Marine Sciences Division with which Kjerfve, pronounced *"Chairfay"*, has collaborated for many years on a wide variety of assignments around the world. To hear him tell it, with a winning blond smile, Kjerfve fell into his profession almost by accident. Born in Skövde, Sweden in 1944, he was first drawn to journalism and photography, working as a teenage reporter for the local newspaper. *"I earned one cent a word,"* he said, *"so wrote the longest articles they'd ever seen."* Then as now an avid tennis player, he won a tennis scholarship at age 20 to Georgia Southern College (U.S.), where he earned a B.A. in mathematics with a minor in journalism.

PREFERS ESTUARIES

"I was walking along the Georgia shore one day with a beautiful girl," he said, *"and to impress her, I did a swan dive off a rock, hitting the bottom in about two feet of water and nearly broke my neck. That convinced me I had to know more about the oceans."* The next step was a job at a marine laboratory, and a shift in studies which, in 1973, led to a Ph.D. in physical oceanography at Louisiana State University. The same year he joined the faculty of the Belle W. Baruch Institute for Marine Biology and Coastal Research, University of South Carolina, where he has been a full Professor since 1986. A Certified Open Water SCUBA diver with experience down to 130 feet, he nonetheless prefers estuaries and lagoons. *"I really don't like multiple-day cruises on the ocean,"* he explained. *"What interests me are gradual processes and ever-changing environments."*

Kjerfve's collaboration with UNESCO began in 1983 when he spent two months in Thailand as a UNESCO/UNDP specialist to help improve marine science post-graduate education at Chulalongkorn University in Bangkok.

From then on, his expertise was regularly sollicited in the framework of the UNESCO/UNDP Regional Project on mangroves and coastal ecosystems in Asia and the Pacific. He notably participated in the Project's field survey carried out (1988-1989) in the Klong Ngao mangrove wetlands near Ranong, Thailand.

Kjerfve has since 1985 been a Steering Committee member of CARICOMP (Caribbean Coastal Marine Productivity), a UNESCO/COMAR regional pilot project, and last year spent a month in Paris to help develop COMAR's 5-year plan for Asia and Latin America and the Caribbean.

"Kjerfve brings a new eye to coastal studies," says Steyaert. *"Whereas mangrove researchers are most often biologists, ecologists or foresters, Kjerfve, as a physical oceanographer, looks at the broader geophysical processes. Yet he is polyvalent, open to interdisciplinarity."* His recent *"Manual for Investigation of Hydrological Processes in Mangrove Ecosystems"* demonstrates this dynamic, systems approach, with the additional merit of outlining simple methods, using instruments commonly available even at remote field stations in tropical countries.

Recently, as a member of the UNESCO/COMAR Working Group on Sea-Level Rise and its Influence on the Coastal Zone, Kjerfve cast his *"new eye"* on another timely issue by co-authoring *"Relative sea-level change : a critical evaluation"*.

Among his myriad activities, he is often called upon to apply his knowledge, as court witness for instance, to testify on such controversial matters as the impact of leveling sand dunes, the diking or dredging of marshlands, or the building of marinas. During a 1987 murder trial in South Carolina, he was even asked to give his expert opinion on the drift of a dead man under the action of currents and winds.

Since 1988, he spends half the year at the Universidade Federal Fluminense, in Niterói (Brazil), teaching and doing research on the *"Hydrology of estuaries and lagoons"*.

"For UNESCO, he is the ideal collaborator," said Steyaert, *"because he has roots firmly anchored in an advanced research institution in the industrialized world, yet is equally at home in developing countries. Björn Kjerfve is a typical example of an international scientist bridging the North-South gap, someone whose global horizon should serve as an inspiration for younger generations."*

Betty WERTHER

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DOWN WITH SEA-LEVEL RISE !

While most scientists no longer predict "doomsday" they agree that sea levels will probably rise, and that only co-ordinated global action can help us predict and prepare.

Venice, Dhaka, Leningrad, Osaka ... cities of history and romance, but perhaps also cities in danger. Only a few years ago, some scientists were predicting that, due to greenhouse warming, global sea level would increase from 50 cm to one metre in the next 100 years. This was the case at an international meeting on "*Impact of sea-level rise on cities and regions*" hosted by Venice in December 1989.

The same doomsday predictions were made on the island republic of Maldives at a similar "*Small states conference on sea-level rise*" the same year. Indeed, neither the Maldives nor Venice have land higher than two metres above today's mean sea level. For Venice, with a 30 cm rise and no defences, the Piazza San Marco would be flooded 360 times a year by normal tides. True, in the past 50 years, relative sea levels in Venice have increased by 23 cm, but this largely because the land is sinking as a result of groundwater pumping.

The fact is that worldwide sea levels have increased only by about 15 cm over the past century. The Melting of glaciers and the thermal expansion of the oceans have been partly responsible, but their respective contribution is almost impossible to gauge, and the link with greenhouse warming is not clear. Obviously, therefore, estimates of global sea-level rise for the next 100 years are very tentative.

Unfortunately, politicians are not impressed by scientific caution. They, like the citizens of Venice and the Maldives, want action now. Fortunately, as a result of consultation and study, agreement on necessary action is beginning to emerge.

For many coastal cities, pumping of groundwater for local supply must stop. In this respect, Venice is well on the way, having already engineered a water supply from more distant sources. Some cities, including Venice, can also build defences across critical connections to the sea, such as the Thames Barrier, designed to protect London for the next 50 years. But artificial defences don't last forever.

CORAL MINING MUST STOP

Natural defences, on the other hand, may keep ahead of sea-level rise even as high as 50 to 70 cm a century. Coral growth in places like the Maldives, and the accretion of sediments in coastal mangroves will compensate. But the mining of coastal coral for building must stop or the protection it gives will be lost.

The major difficulty, however, is that planners need reliable measurements. Although it is possible to measure sea levels locally to within one or two cm, long-term increases may be hidden by local year-to-year changes. In addition, vertical land movement must be taken into consideration. Venice may be sinking, but Scandinavia and most of Scotland are "*pushing up*", in places by a metre a century, after removal of the ice at the end of the last glaciation some 10,000 years ago. All impacts of future sea-level change will be felt locally, but the problem is global. In fact, early identification of accelerated rise will only be possible if year-to-year variability is understood and removed from the records.

All the scenarios imply an increase of only a few centimetres over the next 20 years. During this period we need to strengthen our capacity to predict links between global temperature increases and other aspects of climate change to sea-level rise. For this, we need comprehensive monitoring systems co-ordinated within a global framework.

Among these is the Global Sea-Level Observing System (GLOSS), launched by UNESCO's Intergovernmental Oceanographic Commission in 1985. The just-published GLOSS implementation plan describes the function, constant review and gradual improvement of over 300 gauges building on a network of permanent sea-level stations for obtaining standardized observations, collecting measurements and relaying them to data centres.

To understand the year-to-year changes, we also need to understand ocean circulation and how it is driven by winds and by the balance of tropical warming and polar cooling. Hence, the World Ocean Circulation Experiment (WOCE), involving scientists from many countries who, from 1990 to 1995, will be surveying ocean temperatures, salinities and currents.

Early warning of sea-level rise will allow for effective planning, such as gradual relocating to higher ground. For places like Venice and the Maldives, however, this is not an option. There is nowhere to go. Instead, a careful balance of engineered defences and the protection of natural defences will be necessary.

Whether these rational and progressive responses to the problem will satisfy coastal dwellers at risk is an open question. The small boy at a "*Green*" demonstration in the Maldives expressed his opinion on a home-made banner which read "*Down with Sea-Level Rise*". Clearly, the problem cannot be left for his generation to solve.

David PUGH, IOS Deacon Laboratory
Chairman of the IOC Group of Experts on GLOSS
UK Delegate to the IOC Executive Council

MENDING THE MANGLE

A luxuriant secret world teeming with diverse life that has beauty and purpose revealed only to the people who dwell within it or the intrepid visitor.

Mangrove trees form part of the ethos of sheltered tropical and sub-tropical coasts where they often appear as productive forests. Mangroves are plants that grow on the muddy coastal flats that link land and sea. In this indeterminate world, bizarre events occur. Tides engulf the trunks of trees, aerial roots loop above the mud, buoyant seedlings abound while others germinate on the tree and crabs climb among the branches. The mangle, as it known in the scientific community, is a luxuriant secret world teeming with diverse life that has beauty and purpose revealed only to the people who dwell within it or the intrepid visitor.

There is no close relationship between the different plants, and relatively few species, in these watery forests. However mangroves have certain adaptations in common that give them a comparative edge in their chosen habitat and all mangroves are partially tolerant of seawater.

The total worldwide mangrove area, estimated at 10 million ha., provides a home for coastal dwellers, a nursery for fish, crustacea and molluscs and a natural habitat for a wide range of aquatic life. They supply coastal marine waters with nutrients and organic matter, and make fertile fishing grounds. Mangrove ecosystems influence climate, prevent coastal erosion, contribute to land accretion and act as buffer zones in cyclone prone areas. They also provide wood for fuel, housing construction, boats, fishing gear and charcoal, as well as honey, tannin, fodder, medicinal plants and edible animal species.

POPULATION PRESSURE

Throughout the ages mangroves have yielded riches to benefit humanity: archeological remains indicate that Polynesians used mangrove swamps to promote land accretion on small islands; ancient Arab mariners built the keels of their dhows with the borer resistant wood of the *Rhizophora* tree, while Amazon Indians extracted a poison from mangrove climbers that enabled them to stun and catch fish .

The recent pressures of population, food production and development have led to widespread destruction of mangrove resources. Frequently, mangrove swamps have been considered as wastelands with little intrinsic value and there has been active encouragement from governments and planners to convert them to other uses.

In the late 70s, it was realised that mangroves had been systematically destroyed by an estimated 20-25%. Concern over the situation led UNDP and UNESCO to launch, in 1982, a regional programme for research and training on mangrove ecosystems in the Asia and Pacific region. This project ran until 1986 when it was followed by a second programme of research and its application to the management of mangroves. The second programme, completed in 1990, involved hundreds of scientists, planners, managers and policy makers from many parts of the world. The whole effort was co-ordinated by Dr. Marta Vanucci, a Chief Technical Advisor with outstanding commitment and energy, who has come to be regarded as a mystagogue of the mangroves.

The main outcome of all this work has been to convince people and their governments that mangroves represent a valuable resource that should not be removed without a careful analysis of the implications. The concept of sustainable development has been accepted, so that perturbation of the mangroves is now not generally approved unless their natural productivity is preserved. A network was established between the 22 countries taking part in the Asia-Pacific programme and there exists a Regional Mangrove Coordinating Committee to aid cooperation. The interchange of scientists, students and information, between these countries has raised the level of awareness of the importance of mangroves and forged lasting bonds between the participants. In the first stage of the project, training programmes were organized covering topics as diverse as mangrove management, remote sensing techniques and microbiology. This has produced an informed group of people who are well placed to advise governments on the correct utilisation of mangroves. There has also been a steady stream of publications including reports, occasional papers, and journal articles.

The second programme focussed on a selected mangrove site at Ranong, Thailand. This case study was designed as a model for planning the survey and research of other mangrove areas. The culmination of three years of intensive study is about to be published and the report should be invaluable to mangrove managers in many parts of the world.

The success of the UNDP-UNESCO mangrove programmes has led to a worldwide upsurge of interest and concern for the rational utilisation, rehabilitation and conservation of these forests. An International Society for Mangrove Ecosystems has been formed with support from Japan to continue and expand the work that has already begun. There can be no doubt that the UNDP-UNESCO mangrove programme has proved a successful catalyst in the process.

However, there is still much to be done. Mangrove forests are still disappearing, coastal dwellers are still being deprived of their livelihoods. There is an urgent need for accessible and simple information on how to restore damaged mangrove ecosystems and there is the task of sustaining concern for these forests. The mending of the mangle has only just begun...

Prof. Colin FIELD
Associate Director, City Polytechnic of Hong Kong

Images from the SPOT satellite

COASTAL ZONES : A BIRD'S EYE VIEW

GUINEE-BISSAU, ON AFRICA'S WEST COAST (Photo CNES 1986/Distribution SPOT IMAGE)

THE UNHOSPITABLE COASTLINE OF GUINEE-BISSAU

A flat yet extremely partitioned world divided into forest, savanna, cultivated areas, mangroves and bare salted soils is to be found on this stretch of Guinée-Bissau's coast, photographed by the cameras of the SPOT satellite.

At an average of only 15-20 metres above sea-level, this coastal zone consists of large areas of swamp, formed of cavities filled with recent alluvial deposits and shaped according to the whim of the tides. They were scooped out during a period when sea-level was even lower than today, and then refilled as the water rose.

Vegetation varies from dense, equatorial forest in relatively good condition, to mangroves, which, in this photo, are seen as black areas along the coast or spread along the edge of the swamps.

Population density is low, except in the rice-growing areas which appear on the photo as white patches.

(SPOT, sent into orbit in 1986, circles the globe in only 100 minutes at a speed of 26,000 km/h and an altitude of 830 km. It can survey the whole of the Earth's surface in 26 days.

Every SPOT image covers a 60km square surface. However it can zoom in on area of only 10m square on request. The satellite was launched to facilitate scientific exploration, and is a particularly useful tool for agriculture, as well as such sciences as cartography and geology.)

NEW CALEDONIA'S WEST COAST : A ZONE COMBINING THREE EXTREMELY VARIED ECO-SYSTEMS (Photo CNES 1988/Distribution SPOT IMAGE)

CORAL REEFS

In this photo, the reef is separated from the coast by a wide lagoon, which is gradually being filled by sand and sediment (the light zones to the right of the reef).

The jagged coast is formed of rocky recesses and small alluvial plains at the openings of valleys. Mangrove swamps reach out into the lagoon and in certain places mudbanks, devoid of any vegetation, emerge from the water (seen here as white patches).

Heading inland, steep escarpments rise quickly to almost 1,000 metres in altitude, the whole region being covered by forest.

ESTUARIES AND DELTAS

Clearly visible in the midst of a vast sandy plain at the frontier of Iraq and Iran, the Euphrates river which has received the Tigris waters to form the Shatt al-Arab, continues southeastward to the Gulf. This waterway carries such large quantities of silt that its mouth is located an estimated 200 kilometres farther seaward from where it stood 5000 years ago.

The tidal river is so large that it is navigable for oceangoing vessels over some 150 km as far as the port of Basra (Iraq).

On the riversides of the region which is famous for its date palm groves, the cultivated plots clearly stand in contrast with sandy areas.

ALL ARTICLES ARE FREE OF COPYRIGHT RESTRICTIONS. SEE P. 3

AN ALTERNATIVE TO DESTRUCTION

The time frame for recovery of a damaged coral reef can range from years to centuries.

A coastal village in Kenya faces a severe erosion threat because fossilized coral from a protecting reef has been quarried for village housing. In Sri Lanka, some 10,000-15,000 tons of coral are removed from the coastal zone annually to make cement, while the uncontrolled exploitation of corals and coral sand in the Maldives for the same purpose has reached critical levels and directly threatens the tourist industry. Ironically, huge, and expensive concrete barriers are now used in parts of the Maldives to protect those beaches once sheltered by the reefs.

There is, however, an alternative to the destruction of the world's coral reefs, argues leading Australian coral reef ecologist, Dr. Terry Done. A five star hotel built to cater for the growing tourist trade on Mauritius, for example, has installed a sewerage treatment plant which, according to Dr. Done, sets world standards.

STATE OF THE ARK

Based at the Australian Institute of Marine Science (AIMS), Dr. Done travelled to Mauritius in 1989 and 1990 for UNESCO's COMAR programme, to run short-term training workshops for marine scientists in the region. He has also prepared a number of publications on reef ecology and protection for the programme. The workshops enabled some 30 young marine scientists to learn how to set up baseline studies, which allow for the monitoring of the impact of human activity on coral reefs. Ideally these studies would trigger action to combat any potential reef threat but it is a complex issue and Dr. Done says he is not optimistic that economic circumstances will always allow for adequate responses.

Even the provision of glass bottom boats for the first 10-day workshop on Mauritius, for example, presented a major logistical hurdle in what was to become a learning process for both tutor and students. A veteran diver after more than a decade with AIMS, he described the vessels provided for the first reef forays as *"state of the ark"* technology.

High on the list of threats to reefs, according to the marine scientist is human activity. Coral reefs are the home of vast numbers of fish and other reef dwellers which makes them prime targets for those societies which rely on fish as their main source of protein. Certain fishing techniques used in South-Asia, parts of East Africa and the Caribbean and involving the use of explosives or poisons further aggravate the problem. Done says the pressure is mounting in many countries, and remaining reefs risk becoming marine deserts because governments have failed to address those issues contributing to the problem such as population growth.

Other more obvious contributing factors to reef destruction are almost universal and include silt run-off caused by more intensive agricultural practices and unchecked disposal of wastes from both agriculture and secondary industry. Paradoxically, millions of dollars in government research funding has been poured into investigating crown of thorns starfish reef destruction in Australia, which scientific opinion now believes is the result of a natural boom and bust cycle rather than human interference.

In the Pacific, Terry Done led a 1988 expedition to Vanuatu where, although the sea is the larder for a population of more than 120 thousand people, pressure on the reefs from subsistence lifestyles is not regarded as serious. Rather, coral deaths result from cyclones, which are capable of levelling fringing reefs along coastlines, watershed clearing for forestry, which cause high levels of silt run-off, and crown of thorns predation.

Dr. Done says one of the most immediate problems confronting developing countries is the provision of food and employment that don't damage reefs. The learning process, he says, is underway, but will be long and difficult. He sounds a clear warning to marine scientists in these countries, saying one of their greatest challenges is distinguishing between natural and human damage to reefs. The time frame for reef recovery, he adds, may range from years to centuries, and it is a task confronting not only marine scientists but politicians, government administrators and the rest of the community.

"Without knowledge, and without a broad geographic spread of people with that knowledge, we don't have a chance of tackling these problems at all," says Dr. Done. *"There are examples which give cause for optimism about reef survival including Mauritius, where the reef awareness message is widely accepted in the community. The Philippines is also actively supporting coral reef research and programmes aimed at managing coastal systems, including coral reefs and mangroves, properly."*

Dr. Done says, however, that the greatest hope of all is an increasingly well informed generation of students who, even at primary school level, are being encouraged to recognise the values of conservation and sound management of resources.

Ken ORR,
Townsville, Australia

SPREADING THE KNOWLEDGE

Two programmes aimed at protecting the coasts of Africa and the Caribbean.

COMARAF

Lake Nokoué in Cotonou (Benin), the lagoons of Abidjan (Côte d'Ivoire) and Lagos (Nigeria), all of which are essential food sources for their human inhabitants, are suffering falls in productivity through over-exploitation and pollution. Erosion from the sea and urbanization is destroying the western side of the Cape Verde Peninsula (Senegal) at the rate of more than a metre per year. To combat these threats to Africa's coastline, COMAR, in January 1989, launched COMARAF, Research and Training on Coastal Systems in Africa.

The continent's galloping demographic growth has led to an big increase in population of the coastal zones, which are economically more productive than the interior. The human activities, along with erosion processes, have led to an anarchic exploitation of resources and a worrying degradation of the environment.

The rational management of coastal resources demands sound scientific knowledge. COMARAF's objective, therefore, is to provide decision makers with this knowledge, allowing them to then move towards the sustainable development of coastal zones. To achieve this, an extensive multidisciplinary study is required of the most vulnerable coastal systems.

Feasibility studies led to the elaboration of a $3.5m programme of activities. This had to be cut to $1m, the sum contributed by UNDP, for the first phase covering 1989-1991, which has seen the establishment of multi-disciplinary teams in each of the 16 participating countries (Benin, Cameroon, Congo, Côte d'Ivoire, Ethiopia, Ghana, Guinee, Mauritius, Kenya, Madagascar, Nigeria, Senegal, Sierra Leone, Tanzania, Togo and the French territory of Reunion). The overall project is led by Professor Salif Diop, a Senegalese geomorphologist based at BREDA, UNESCO's regional office in Dakar.

The multidisciplinary teams work on the productivity of the coastal waters, oceanography of the surrounding ocean and the geology of the coastal fringe and continental shelf. Pilot projects have dealt with coral reefs, mangroves, estuaries, deltas, coastal lagoons and coastal hydrodynamics. UNDP has been sufficiently impressed by the results of the past two years work to a allocate an extra $50,000 to allow for the completion of the programme's first phase in December this year. At the end of this period, more than 80 young researchers, technicians and planners will have followed training courses in the field while another 300 researchers will have been associated with the project's different activities.

REAPING THE BENEFIT

Technical meetings, training courses, seminars and study trips have favorized an intense exchange of scientific and technological information. On top of technical reports and documents, a quarterly information bulletin, with a circulation of 500 keeps the scientists in constant touch.

In certain island states, the results of COMARAF activities are already reaping their benefit. In Mauritius, for example, researchers have perfected programmes to protect the coral reefs that attract some 200,000 tourists annually. Protecting the reefs also means protecting important feeding grounds for marine life and the development of natural barriers that act as a protection against the devastating force of cyclones. In other African countries, breakwaters have been constructed to limit erosion and thus protect fishing or tourism.

COMARAF has generated much enthusiasm and raised hopes. However, unlike Asia, where COMAR is given firm support by the countries of the region, the project suffers acutely from insufficient resources and has had to look elsewhere for funds. The training, research and information exchange that has proved so promising in the first phase will not bear its fruit if the second phase (1992-1996) does not go ahead. The budget for this phase is an estimated two million dollars. Negotiations are underway between UNESCO and UNDP as well as the participating countries and other international and local financing sources in an effort to ensure that COMARAF is allowed to achieve its goals.

Diomansi BOMBOTE
Dakar

CARICOMP

CARICOMP is one of UNESCO's efforts to improve our understanding of the ecological systems of the Caribbean coastal zone. This region is being rapidly transformed by human activities, such as tourism and urban coastal developments, and in some instances to inland activities such as logging and deforestation. These activities may eventually produce a severe transformation of the coastal ecosystems of the region. Should this happen, the ecological consequences would be quite serious, possibly rendering the coastal zone useless for the purposes, that, in the first place, motivated their development.

CARICOMP, which began in 1985, is working towards solutions by contributing to the scientific understanding of the dominant coastal ecosystems of the region namely mangroves, seagrasses and coral reefs, and getting this knowledge across to coastal zone administrators.

These objectives are not easy to achieve for several reasons, including the substantial differences between these three coastal ecosystems. Consequently, most of the pertinent scientific information available is not necessarily comparable or applicable outside of a given locality. In addition, technological and scientific capabilities are relatively low, and cultural differences extremely varied in the more than 25 countries that constitute the Caribbean community.

On the other hand, scientists in the region are clearly aware of the dangers of unplanned development of the coastal zone and of the difficulties involved in devising and enforcing rational management plans. Consequently, CARICOMP has been set up as a network of co-operating marine laboratories which have pooled their resources to overcome local technical and scientific limitations. The only requirement to participate is willingness to work and agreement to follow the same sampling routines used by all other labs, as established in the CARICOMP methods manual and methods workshops.

As is the case for all UNESCO projects, education and training is a priority. This is mainly carried out through workshops, scientific exchange and publications. Information obtained during the project belongs to all participant laboratories. Through a CARICOMP Data Centre every participant laboratory receives the information gathered by all other participant laboratories. The only condition for its scientific use is to acknowledge that it is generated by the CARICOMP project.

That the project has the support of the region's scientists and decision makers is beyond doubt. Despite the difficulties in obtaining financial support, all 26 participant marine laboratories are prepared to cover their own expenses, both personal and logistical, in order to ensure the programme's continuation. UNESCO and other sources have contributed to the financing of workshops, however the tight funding situation has imposed a cutback in the project's scale, which will come into effect as of June this year. This despite the fact that the task undertaken by the scientists involved remains far from completion.

ERIC JORDAN DAHLGREN
CARICOMP Steering Committee, Mexico

TO FIND OUT MORE ...

UNESCO REPORTS IN MARINE SCIENCE: series dealing with specific research projects. Recent titles include *"Relative sea-level change: a critical evaluation"*, the report of the UNESCO (COMAR) working group on Mean Sea-Level Rise and its Influence on the Coastal Zone (No.54/1990); *" Coastal Marine Ecosystems of Africa. Objectives and Strategy of the COMARAF Project"* (No. 48/1988).

UNESCO TECHNICAL PAPERS IN MARINE SCIENCE: issued by the Division to inform scientists and administrators of research developments. Recent titles include: *"River Inputs to Ocean Systems: Status and Recommendations for Research"* (No. 55/1988); *"Coastal Marine Systems: Review and Research Recommendations 1988-1990"* (No.57/1989).

CORAL REEF MANAGEMENT HANDBOOK: 2nd edition, 1988. Provides advice to political, administrative and technical decision makers, and in fact to anyone interested in the rational management of these fragile resources. UNESCO/ROSTSEA (Jakarta), 321 pp.

THE SHORE ECOLOGY OF THE TROPICAL PACIFIC: by John Morton. An introduction, for students going into the field, not only to reefs, but to the supra-tidal shore and to mangroves, beaches and soft flats. UNESCO/ROSTSEA (Jakarta), 1990, fully illustrated, 290 pp.

GLOBAL SEA LEVEL OBSERVING SYSTEM (GLOSS) Implementation Plan, IOC Technical Papers No.35/1990.

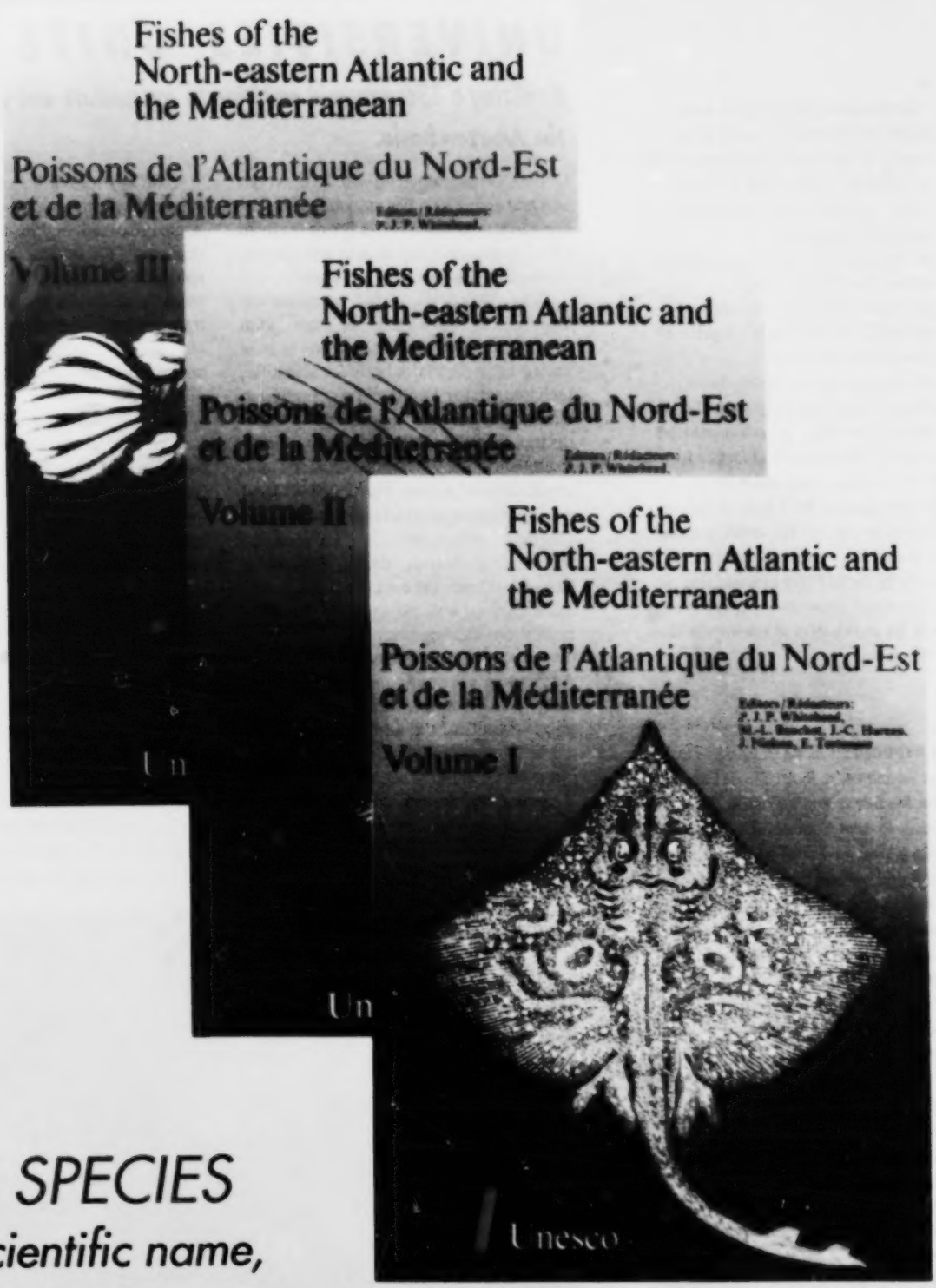
NATURE & RESOURCES, UNESCO's quarterly science review, has devoted several issues to coastal systems: *"Managing the Coastal Environment"* (No; 2/1990) examines the implications of the demographic shift to these areas; *"Ocean and Coastal Research"* (No.4/1990) provides a scientific overview with some projections for the future. See review p. 4.

IMS NEWSLETTER: published quarterly by UNESCO in collaboration with other UN agencies, provides information on international marine science activities and publications, including a calendar of coming events.

FISHES OF THE NORTH-EASTERN ATLANTIC AND MEDITERRANEAN: complete guide to European and Mediterranean sea fishes, in three volumes, gives main features of all known species with over 2,000 illustrations and 1,200 distribution maps. Introductory pages in English and French, main text in English.

MANUAL FOR INVESTIGATION OF HYDROLOGICAL PROCESSES IN MANGROVE ECOSYSTEMS: by B. Kjerfve, UNESCO/COMAR/UNDP, 1990, illus., 79 pp.

REEF CORALS AND SPONGES OF INDONESIA: A 3 1/2-hour video-based learning module with underwater filming of numerous species and computer simulations, accompanied by a 65-page text. Unesco, 1990.



1250 SPECIES

Their scientific name, common name, description, habitat and location.

THE THREE VOLUMES
1453 pages, 750 FF

● **"GWONDANA DISPERSION AND ASIAN ACCRETION"**, a study of the breakup of the ancient supercontinent and the formation of Asia, is one of 10 new studies approved by the International Geological Correlation Programme (IGCP) at its 19th Board Meeting at Unesco Headquarters from February 4 to 8.
The project is being co-ordinated by geologists from the People's Republic of China, France and Japan.
Also approved were a German-Soviet proposal concerning the geology of lakes, another from France on paleoweathering surfaces - the alteration of landscapes across geological time, and a Soviet-American proposal for a study of the Precambrian Era - c. 600 million years ago.
At present, 59 projects are being carried out jointly by the IGCP, run by Unesco and the International Union of Geological Sciences with the participation of scientists in about 120 countries.

▼ **A HYDROLOGICAL DATA BANK** is to be set up jointly by four countries around the Mediterranean - France, Spain, Romania and Yugoslavia, to exchange information and facilitate research on rare and extreme floods and on rainfall.
Other countries are expected to join in later, among them at least Italy and Greece, possibly Switzerland, and eventually countries in North Africa.
The number of topics covered by the data base is also expected to grow as the project continues.
Called Alps-Mediterranean Hydrology - Flow Regimes from International Experimental and Network Data (AMHY - FRIEND), and launched under the aegis of UNESCO's International Hydrological Programme at a meeting held at Headquarters on February 11 and 12, it is a successor to a similar FRIEND project set up in 1984 between 13 countries in Northwestern Europe.

UNESCO SOURCES

UNIVERSITIES UNITE

Realizing a 136 year-old ambition to consolidate and protect the Amazon basin.

UNESCO has teamed up with 23 universities and some 30 other associated institutions in the Amazon Basin countries in an effort to preserve the natural and cultural heritage of the *"lungs of the world"*.

The Association of Amazonian Universities (Unamaz), as this joint programme has become known, is now emerging as the major body for scientific, technological and cultural co-operation to stand as a bulwark against the gradual disappearance of the Amazon forest. Established in 1987 with financial and organizational support from UNESCO and the Organization of American States (OAS), Unamaz comprises 23 universities representing Bolivia, Brazil, Colombia, Ecuador, Peru, Venezuela, Guyana and Suriname, as well as a number of other institutions dealing with the concerns of the Amazon region. It is an offshoot of the Amazonian Co-operation Treaty, signed nine years earlier in 1978 by the governements of the same countries, and the realization of an ambition first voiced more than a century ago in 1855 by then Venezuelan president, Antonio Leocadio Guzman, who spoke of *"the need to consolidate the common empire of the Amazon"*.

The key role of the organization is to promote international co-operation among Amazonian universities and research institutions. This is principally achieved by instigating new projects in the various member scientific research centres, and training specialists who can come up with effective responses to the need for the harmonious and sustainable development of the zone.

José Seixas Lorenzo, president of Unamaz and former rector of the Universidade Federal do Para (Brazil) says that *"progress is slow but sure"*. According to this eminent academic, the most significant innovation is the united approach taken by Unamaz to the problems confronting the region. By joining forces and tackling the difficulties multilaterally it will be possible, in Seixas Lorenzo's view, to capture the interest of the politicians. Guidelines will thus be laid down so that the governments concerned can take decisions which avoid regional imbalances.

AGENTS OF CHANGE

The universities also have an vital role to fulfil as agents of social change; informing the public of the region's potential assets and how they can be managed.

UNAMAZ : PROTECTING THE CULTURAL HERITAGE OF THE AMAZONIAN PEOPLES, SUCH AS THE KARAJA INDIANS IN BRAZIL, SEEN HERE PREPARING FOR AN INITIATION CEREMONY FOR YOUNG BOYS. (Photo Unesco/Nathalie Potesch).

"The seeds of the future lie in the Amazon basin," stresses Venezuelan expert, Antonio Pérez, who sees the Amazon forest as a vast archive of biological combinations. To destroy it would be not only a blow against humanity, but a grave economic error.

In order to make some headway in this direction, Unamaz has set up the Interuniversity Programme for Amazonian Cooperation (Programaz). This multidisciplinary programme addresses three major tasks.

The first of these is training - the aim being to turn out highly skilled people capable of creative, original and sustainable ideas for the region's development.

Then comes the protection of the cultural heritage of the Amazonian peoples, which is under serious threat from current settlement practices. To achieve this, Unamaz will concentrate on retrieving, studying and preserving works of historical and cultural value.

The third major task is one of information. The aim here is to establish a system of scientific, technological and cultural information linking the eight nations taking part in the project. This will be done through the establishment of data bases in priority areas such as science, technology, the environment and culture, which will produce various publications for both specialists and a broad public. Unamaz hopes in this way to foster communication and knowledge of the day-to-day reality of the region. UNESCO's General Information Programme (PGI) has been closely involved over the past two years with the planning and establishment of the Amazonian Information System, known as Siamaz, which will be funded by the Inter-American Development Bank to the tune of $1.2m. To Siamaz can be added the recently launched *"bibliographic alert"*. This operation aims to bring together and provide access to the some 20,000 books, articles and documents that have been written about the region, as well as keeping track of any new publications.

Activities are also increasing in the economic field. A number of workshops, for example, have been organized to generate appropriate technologies conducive to local development. These workshops, covering such issues as agroforestry management, population, distance education and resource evaluation, are held in tandem with a six month training course offered by the Universidade Federal do Para (Belem, Brazil) which aims to arm young scholars and decision makers with the analytical and technical means to examine the Amazon's particular problems.

WIDESPREAD SUPPORT

Various projects are also coming in from all latitudes for such activities as the marketing of indigenous products, rabbit breeding, fish farming and livestock raising. The results of these projects are passed on to all countries concerned. UNESCO's Man and Biosphere Programme is working closely with Unamaz members in this area, examining ways of sustainably using forest resources. MAB is also jointly planning research and training programmes with Unamaz on the management of these resources, and regularly supports seminars on subjects such as *"Ecological disorder in the Amazon"*, which was held last October and attracted some 500 participants. The Organization is also investigating the possibility of creating a chair, assuring fellowships for Latin American students and providing the contribution of a high level international expert in one of the fields of the Unamaz programme.

Given the global interest in this vital part of the world, key figures in Unamaz say they are fully confident of obtaining the necessary funds to achieve their scientific and technological goals. UNESCO has so far contributed some $200,000 for various seminars and training programmes as well as the elaboration of the Unamaz programme. The European Economic Community has also shown interest in supporting Unamaz projects.

Given the desire for Amazonian development with a more human face, many of the programmes being developed focus on children's education and public health while University studies are taking account of the factors affecting relations with the indigenous people of the zone. Despite the complexity of the situation, Unamaz is working doggedly to establish an equilibrium between human beings and their environment in the Amazon - which is surely emerging as one of the major challenges of the next decade, and, indeed the 21st century.

Asdrubal BARRIOS
Caracas

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"LENINGRAD ON THE NEVA" was the theme of an exhibition at Headquarters from February 19 to 28.
On view were 72 photos by Dominique Roger which fully captured the beauty of the historic centre and environs of the city, often called the *"Venice of the North"*.

ONE OF FOUR HORSES ON THE ANICHKOV BRIDGE AND THE MID 19TH C. BELOSSELSKIKH-BELOZERSKIKH PALACE (Photo Unesco/Dominique Roger).

Built by leading French, Italian and Russian architects for Peter the Great, Leningrad constitutes an exceptional architectural ensemble of palaces, churches, convents and imperial residences. A 25-min. film on the city was also shown during the exhibition. Recently inscribed on the World Heritage List, Leningrad is threatened by the proximity of the Soviet Union's largest industrial complex, and to a certain extent by tourism.

▼

EUROPEAN EDUCATION EXPERTS from 29 countries, meeting at UNESCO Headquarters from February 12 to 15, gave priority to projects in central and eastern Europe. The regional consultation on *"Co-operation for the Renewal and Development of Education in Europe"* (CORDEE) called for increased exchange and research activities in such fields as foreign language instruction, multi-cultural education and the environment. It also recognized Adult Literacy, including the provision of education to migrants, nomads, women and marginalized youth as an important area for action.

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CARIBBEAN EYE, a series of 13 half hour programmes for television produced by the Banyan company, with a $40,000 contribution from UNESCO's International Programme for the Development of Communication (IPDC), made its screen debut in Jamaica this month. It is the first documentary series about the Caribbean, made by Caribbeans, and covers areas of regional culture including local celebrations, the indigenous population, music, theatre and the arts, oral traditions, women and the film industry.

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THE WORLD FEDERATION OF THE DEAF (WFD) held its Bureau Meeting at Headquarters from February 4 to 6. WFD President, Dr Yerker Andersson of Gallaudet University, Washington, D.C. (U.S.A.), General Secretary, Lisa Kauppinen (Finland) and Bureau members from 11 countries, laid final plans for WFD's World Congress in Tokyo next July.
They also met with UNESCO officials to strengthen co-operation between the two organizations, notably in developing countries where 80% of the deaf live. Finally, the Bureau explored possibilities for holding a world conference with UNESCO on bilingualism (sign and oral skills), taking into account the strong WFD stand in favour of sign language, as a deaf person's first language, and a basic human right.

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EAST-WEST DRUG ADDICTION was the theme of a colloquium held at Unesco Headquarters on January 31 and February 1 as part of a larger meeting, organized by the ECC and the French associations FIRST and ANIT from January 28 to February 1.
The aim of the meeting was to lay the foundations for cooperation between East and West in the form of team exchanges, thus contributing towards the creation of a truly European prevention programme.

THE FAMILY IN FLUX

"Fewer aunts, uncles and cousins, but more great-grandparents".

"Birth rates in many European countries have dropped by more than 25%; divorce rates have tripled...but the most suggestive change is that the number of children born outside of marriage has climbed from seven to 26% in France, and has reached 50% in Sweden..." explains French sociologist, Louis Roussel.

In China, although the nuclear family has become the dominant pattern, the unit remains *"highly valued ... as a sweet and intimate world ... (it) is still a place that Chinese people aspire to"*, according to Dai Kejing, Research Director at the Institute of Sociology within the Chinese Academy of Social Sciences.

In Africa, the extended family remains the main model and the richer the family the more children it is likely to shelter, despite a certain tendency towards nuclearization.

These are just some of the findings presented at an international symposium on the future of the family, held at UNESCO's Paris headquarters from January 21-23. Attended by some 37 jurists, sociologists, doctors and representatives from various non governmental organizations, the symposium was the culmination of a UNESCO-initiated two-year study on the subject, launched to prepare the ground for the International Year of the Family (IYF) in 1994. Under this study a series of regional seminars were held to examine the changes occurring in this largely undefinable but ubiquitous social unit in Latin America, Asia, North Africa and the Middle East, Sub-Saharan Africa and Europe.

"These regional meetings" says IYF Coordinator Henryk Sokalski, *"revealed a pattern of both uniformity and diversity: uniformity because all regions are being affected by change and diversity because of the singularity of each culture and the region's environment."*

A clear example of this dichotomy can be seen in the mother-child household. *"In the Middle East,"* explains Sokalski, *"such households are very much the result of disruptions brought about by political conflicts, wars and migrations. In Africa, mother-child units are models within larger family structures. In Latin America, they are largely the outcome of economic hardship. In Europe, single-parent families, 90 % of which are female-headed, are the result of high rates of divorce, most frequently initiated by women or, to a lesser degree, as an outcome of the mother's free decision to maintain her single status."*

One constant characteristic, however, is an increasing number of elderly people within the family unit brought about by increasing life expectancy. *"This, combined with the decreasing birth rates in several regions, will lead to 'vertical' rather than 'horizontal' families,"* predicts Djamchid Benham, former programme specialist and now consultant with UNESCO's Division of Population and Human Settlements. *"This means that there will be far fewer aunts, uncles and cousins, but more families with great-grandparents."*

PERSONAL CHOICES

The ramifications of this are far-reaching. In China, for example, where urban families have been restricted to one child for the past 18 years, the categories of aunt, uncle, cousin and even brother and sister will mean nothing for virtually a whole generation of these children. On the other hand, the number of people aged 60 and over in China has already topped 90 million and is rising. Traditionally, the children and grandchildren supported the elderly members of the family, however, the changing family patterns are making this more and more difficult. Thus, grandparents must compete with their grandchildren for a share of the resources provided by the working parent.

This also raises the issue of the roles of different family members. Who is responsible for what these days?

"The masculine and feminine roles within a family ... are no longer 'destinies' imposed by a rigid vision of the world," says Abdulwahabe Boudhiba, Director of the Centre of Sociological Research at the University of Tunis. *"Personal choices have now become a much greater force in human 'destiny'..."*

Personal choice perhaps, but the State has also played an important role in instigating change in this area. In the Côte d'Ivoire, legislation adopted in 1964 and modified in 1983, in one fell swoop supressed the age-old practice of polygamy and the provision of dowries, raised the nuptial age, demanded the consent of both

"MASCULINE AND FEMININE ROLES WITHIN A FAMILY... ARE NO LONGER 'DESTINIES' IMPOSED BY A RIGID VISION OF THE WORLD"
(Photo Unesco/ Dominique Roger).

partners and required that the marriage ceremony be performed by an officer of the state. One small concession to tradition was the continued recognition of the husband as head of the family. In Burkina Faso, however, the state, drawing directly from French law, went one step further and recognized the absolute equality of the husband and wife, arguing that the traditional customs acted as a brake on development.

"Is it up to the State to propose a model of the family that the population must follow, or should it adapt laws according to a country's customs?" ask those involved in the study of the African region.

The question of how to legislate also emerged in discussion on the role of science and biotechnology in family formation and population development, which is one of the major concerns of families in industrialized countries.

The possibility of genetically controlling children is almost within reach, raising a whole range of ethical questions that will have enormous impact on the family at all levels. The European regional meeting held under the auspices of the UNESCO study found that *"development is so rapid and the consequences difficult to foresee"* and that *"there is an urgent need for discussion of ethics on a wide international scale"*.

Despite the upheavals that are shaking family models everywhere, the participants in the study were confident that this *"natural bridge between the individual and society"* would survive. The multitude of family forms, argues Boudhiba, stands as evidence of its «*extraordinary plasticity*".

"We are at a crossroads," says Henryk Sokalski, *"between what the family was in the past, what it is now and what it will be in the future ... a post-industrial or post-production society does not necessarily have to mean a post-family or post-kinship society, although in our search for family models of the future we shall have to make an attempt at reconciling the family notion, which is collective, with that of modern life-styles, which are by far more individualized and consumer oriented."*

Sue WILLIAMS

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UNESCO, THE WORLD BANK AND THE GOVERNMENT IN BEIJING have joined forces to completely overhaul primary, secondary and tertiary level textbooks in the People's Republic of China.
For its part in the $57m project, UNESCO has been given charge of improving the quality of texts for primary and secondary schools through the training of staff at the People's Education Press and the Curriculum and Teaching Materials Research Institute, as well as providing skills training for the Higher Education Publishing House. This will be done through study tours to foreign countries, overseas fellowships, visits to China by specialists and in-country courses by specialists.

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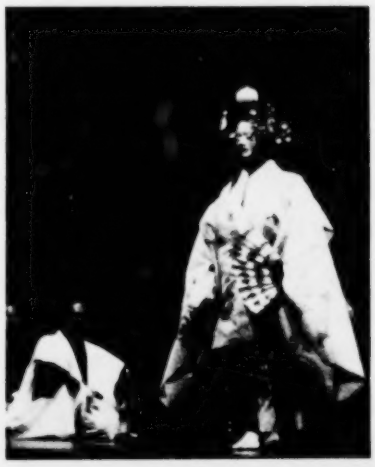
A PERFORMANCE OF THE TRADITIONAL JAPANESE "NO" THEATRE was given before a packed house at UNESCO's Paris Headquarters on February 18. More like mini-operas, the "No" dramas have a history dating back over 600 years, making them one of the oldest extant theatrical forms in the world.
Some 1500 people attended the presentation, performed by the Tsuxma Ensemble and sponsored by the Japanese Permanent Delegation to Unesco, and the Japan Foundation.



ACTOR AKEO KANZE PERFORMS THE DANCE DRAMA "HAGOROMO", PRESENTED AT UNESCO.

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TWELVE COUNTRIES, SOME FOR THE FIRST TIME, have contributed to Unesco's International Programme for the Development of Communication (IPDC). The contributions announced at the 12th session of the IPDC Intergovernmental Council, at Headquarters from February 11 to 18,1 bring the Programme's Special Account to $2.5 million. Among 23 projects approved by the Council, priority was given to nine from least developed countries, including: modernization of Burundi's national press, professional training of journalists and personnel for the future Comorian Television Service, creation of a national news agency in Equatorial Guinea, and a documentation centre for information and communication in Yemen.

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TRADITIONAL HANDICRAFTS IN BENIN are presented in a richly illustrated 256-page book, by Jocelyne Etienne-Nugue, published by the Institut Culturel Africain in Dakar (Senegal). The book, along with another on the Côte d'Ivoire, are the first two volumes to appear in English as part of the collection "Traditional crafts in black Africa". The collection falls within the framework of a programme being carried out with assistance from UNESCO and UNDP for preservation of this aspect of Africa's

cultural heritage in Benin, Côte d'Ivoire, Togo, Niger, Burkina Faso and Ghana. Available in English and French from L'Harmattan, 16 rue des Ecoles, 75005 Paris, France.

STARTING FROM SCRATCH

Flexibility and community involvement keys to rebuilding Afghanistan's schools.

In the past 10 years, 2,000 schools have been destroyed in the war that has ravaged Afghanistan, and as many teachers have either been killed in the conflict or have left the country. The desperate need for reconstruction of the education system is made all the more acute by the flux of Afghan refugees now returning home.

Village Basic Education Centres are one idea being developed by UNESCO to attack the problem. The aim is to provide a low-cost, flexible and multi-purpose centre that can be tailored to the particular needs of villages.

"Such a centre," explains Rodolfo Almeida, head of UNESCO's Educational Architecture Unit, *"would consist of three classrooms for children, a multi-purpose reading room where literacy can be taught to adults and young people, two or three workshops for skills training for men and women, a day-care centre, a teacher's house, a well and toilets, areas for poultry raising and vegetable gardens and space for leisure activities."*

However, the key to the success of any such project is the commitment of the concerned community. Thus, local leaders and representatives are involved from the start. A quarterly newsletter is also published to disseminate information on such topics as health, agriculture, carpentry, irrigation and local crafts, to build local interest and encourage community participation in the project.

CLASSROOM IN A TENT

In cases where no facilities whatsoever exist, a provisional centre can be set up in a large tent. UNESCO's architects and education specialists on the spot have designed mobile room dividers and desks that can double up as chairs and blackboards, to furnish these "classrooms" and get activities underway quickly. If the villagers give their support to the idea, construction of a more permanent centre begins. Inaccessible items, such as roofs, doors, windows, furniture and educational supplies are provided through outside assistance, while the community is expected to make its contribution in labour, allocation of the site and the construction of the foundations and walls. Recruitment and payment of teachers is also a local responsibility.

WORKMEN UPGRADE THE VILLAGE BASIC EDUCATION CENTRE AT ANGORI IN AFGHANISTAN'S GHAZNI PROVINCE (Photo Unesco/Alfeo Tonellotto).

"Such an approach allows maximum flexibility," says Almeida. *"The sequence of actions need not be followed in every case, since no two communities will have the same problems. One community may already be self-sufficient in buildings, but will need help in training instructors, while another might give priority to the provision of roofing for damaged schools and the procurement of educational supplies."*

Construction of the first two centres, at Shash Qala and Guli Khel in the Wardak province, was completed last October. Another six centres are being established, initially with tents, in south-eastern Afghanistan. Plans are also on the drawing board for centres in the northern parts of the country. The operation is being executed by UNESCO and funded by the United Nations Humanitarian and Economic Assistance Programmes Relating to Afghanistan (UNOCA), with a start-up budget of one million dollars.

Although security remains a problem throughout Afghanistan, this grass-roots approach has so far gained widespread support, and offers the basis for the reconstruction of an education system in crisis.

S.W.

BACK FROM THE BRINK ...

After the campaign to save Zaire's white rhinos comes the revival of a very special elephant herd.

In the early 1970s there remained some 3,000 white rhinos in the world ... almost all of them in the savannas of the Garamba National Park in northeastern Zaire. By 1985, all but 10 of the park's 4000 kilo pachyderms had been wiped out by poachers. A cry of alarm went out, and an international campaign to save them was mounted by UNESCO, the World Wildlife Fund, the Frankfurt Zoological Society and the Government of Zaire. The park was declared a World Heritage Site *"in danger"*; two aircraft, several vehicles and surveillance equipment were also provided, and UNESCO organized training for scientists, technicians and gardiens to patrol and monitor the area.

"As a result of our efforts," says David Kabala (Zaire) of the Man and Biosphere Programme (MAB), who is the driving force behind UNESCO's participation in the campaign, *"the herd has now been built back up to 26. The critical limit has been passed - we have brought the white rhino back from the threshold of extinction."*

HANNIBAL'S EXAMPLE

The government of Zaire now wants to develop other activities with park such as tourism, the rhinos being only one of the area's attractions. *"Another of Garamba's unique drawcards is its elephants,"* explains Kabala, *"and in particular, its domesticated elephants."*

It has generally been thought that African elephants, unlike their Indian cousins, cannot be trained. However Hannibal used African elephants to cross the Alps and fight the Romans in 219 B.C and, perhaps inspired by his example, King Leopold II of Belgium decided some 21 centuries later to build up a domesticated herd in what was then known as the Congo Free State. After several abortive attempts, which included shipping elephants from India (all four died) and trying to trap the wild African species, the Belgians succeeded in capturing and taming several youngsters. Early this century, a group of Sri Lankan *"mahouts"*, masters in the methods of training Indian elephants, were recruted to train the *"Loxodonta africana"* and teach their skills to the local handlers. By 1925 more than 50 elephants had been domesticated and many of them were working. At its peak the herd numbered up to 100 and proved a great boon for this remote corner of Africa with few roads and shortages of fuel and spare parts. The training centre in Garamba prospered for another 25 years before going into decline in the turmoil surrounding the country's independence in 1960. Today, only four of the original domesticated herd remain: Lwiru, Kukutu, Zombe and Kiko, all of whom respond to commands in the local Bangala language, as well as French and even a few of the old words used by the mahouts. The aim now is to re-establish the training centre and use the domesticated elephants for transport and tourism purposes within the park. To this end, UNESCO and the "Institut Zairois pour la conservation de la nature" are raising funds to launch an education programme for wildlife management in Garamba, which will include the training of new elephant handlers, or *"cornacs"*, as well as a campaign to raise local awareness of the wealth these lands and their majestic inhabitants represent... provided they are left intact!

"LOXODONTA AFRICANA"... A KEY PLAYER IN PLANS TO DEVELOP GARAMBA NATIONAL PARK (Photo Unesco/Alain Gille).

Sue WILLIAMS
Division of Ecological Sciences

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A WORLD REPORT ON CULTURE AND DEVELOPMENT, to be published during the World Decade for Cultural Development (1988-1997), was the subject of a draft recommendation proposed for submission to UNESCO's Executive Board by the Intergovernmental Committee for the Decade, meeting at Headquarters from February 4 to 8. While the link between culture and development would constitute the backbone of such a document, it would also highlight the diversity and plurality of cultures.

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MAZEN AL-QUBBAJ (JORDAN) was awarded the 1991 IPDC-UNESCO Prize for Rural Communication during the last session of the IPDC Intergovernmental Council, held at Headquarters from February 11 to 18. A radio and television producer, Mr Al-Qubbaj has worked for 33 years covering rural and agricultural development in his country. Through his action, he has helped better the lives of farmers. He has launched tree-planting campaigns, and encouraged more rational use of water resources. The Prize, worth $20,000, aims at *"drawing attention to particularly meritorious and innovative activities which contribute towards the improvement of communication in all its forms, notably in rural communities."*

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To promote an independent and pluralistic press in Africa an **AFRICAN PRESS SEMINAR** will be held in Windhoek (Namibia) from April 29 to May 3. It will be attended by some 100 participants: publishers, journalists, representatives of development agencies and the private sector. The meeting will be organized in collaboration with the UN and concerned NGOs. The Intergovernmental Committee for Promoting the **RETURN OF CULTURAL PROPERTY** to its Countries of Origin or its Restitution in Case of Illicit Appropriation, will hold its 7th session in Athens (Greece) from April 22 to 25. The Intergovernmental Regional Committee for the **MAJOR PROJECT IN THE FIELD OF EDUCATION IN LATIN AMERICA AND THE CARIBBEAN** will hold its 4th session in Quito (Ecuador) from April 22 to 25. Among other topics, the Committee will notably discuss linkages of education and development strategies, and guidelines and priorities for co-operation. On view ... Two **EXHIBITIONS** at Headquarters: the works of Italian painter Giorgio Morandi from April 15 to 26, and tapestries of the Association AUBUSS from May 1 to 16. **THE INTERNATIONAL ROSTRUM OF COMPOSERS** (IRC) will take place at Headquarters from April 29 to May 3. Organized by the International Music Council (IMC), the IRC is an international forum of representatives of broadcasting organizations who come together to exchange and promote contemporary music. **SUCCESS OF ALL IN THE BASIC SCHOOL:** an International Symposium on "Significant Strategies to Ensure the Success of All in the Basic School" will be held in Sintra (Portugal) from May 13 to 18. **HOMAGES:** Roger Caillois (1913-1978) of the Académie Française, will be honoured with a special tribute on May 13 and an exhibition from May 7 to 15; the 70th birthday of Peter Ustinov will be celebrated on April 16. **EDUCATION AND INFORMATION TECHNOLOGIES:** about 30 European experts will meet in Moscow (USSR) from May 15 to 17 to develop a resolution for "Co-operation in the Field of Education and Information Technologies". The main **DOSSIER** in our next issue will be devoted to the World Decade for Cultural Development (1988-1997) being carried with UNESCO as "lead agency". Basically, it aims at fostering a new approach to development focused firmly on cultural and human values.